THE RADIAL VELOCITIES OF *S SAGITTÆ* AND *Y SAGITTARII.**

Measures of seven plates of *S Sagittæ,* employing the low-power sky standard-table described on page 249 have resulted in the detection of a wide range in the radial velocity of this star. As a whole, these plates are much below the average excellence, but are sufficiently reliable to establish the binary character of this variable. The accompanying table contains the number of the plate, the Greenwich date, the interval since maximum, the velocity referred to the Sun, the number of lines used for each plate, and the temperature change during the exposure. If the velocities are plotted in the usual way, assuming the identity of the light and velocity periods, they are seen to follow a curve in every way similar to those of *η Aquilæ* and *W Sagittarii,* and the elements will approximate closely to those determined for *W Sagittarii.* There is also some evidence pointing to a composite character for the curve.

No. Plate.	Date.	Interval since Maximum.	*V.*	Number of Lines.	Temperature Range.	Remarks.
28F	1903 Aug.	9.9	1d.4 —20.3km	20	0°.4C	Underexposed.
33E		14.9	6 .4 —32.2	44	0 .1	
35D		16.9	0 .0 —30.2	45		
42B		26.9	1 .6 —20.2	20	0 .3	Underexposed.
54B	Sept.	6.9	4 .2 + 3.9	41	0 .1	Comparison poor
72B		13.8	2 .8 —17.3	37	0 .0	on one side.
3350C	1904 July	20.9	3 .7 — 3.9	9	0 .0	Underexposed.

As the result of relative measures of four lines on two plates, Dr. STEBBINS found a range of 9km in the radial velocity of *Y Sagittarii.* My own measures of nine plates of this star indicate that it is approaching our system, but not at a constant rate. The range of velocity so far observed amounts to 17km. The form of the curve seems quite different from that of other *Cepheid* variables, but the character and number of the plates available are not such as to warrant any definite conclusions on that point.

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NEW COMPANIONS TO KNOWN DOUBLE STARS.

In the course of my search for new double stars I have recently found that one component in each of the well-known pairs, *Winnecke* 3 and Σ 2775, is itself a close double star.

The former is the more interesting discovery, as the old

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